

Application No. 09/619,123

Filed: July 19, 2000

TC Art Unit: 3737

Confirmation No.: 1997

REMARKS

Claims 75-77 have been rejected under 35 U.S.C. 102(b, e) as being anticipated by Daigle (5,127,409). Claim 75 has been amended to recite that the system has a weight of 10 pounds or less to overcome this rejection.

Claims 78-80, 82, and 84-85 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Daigle in view of Blackwell (5,173,837). However, Blackwell relates to a laptop computer and this fails to address the other requirements needed to provide a portable ultrasound system. Daigle, although disclosing the connection to a desktop personal computer, also fails to address the problem of how to provide a portable system weighing less than 10 pounds.

Of critical importance in the development of such a system was the manufacture of a beamforming circuit that is light in weight and yet is capable of processing the output of a transducer array having a sufficient number of elements to provide a diagnostically useful ultrasound image. Applicant was the first to develop such a lightweight high resolution beamformer that also operates at a low power level to enable battery powered operation. For example, at page 31, lines 7-27, a 10 channel beamforming circuit is described that is capable of processing the output of a 64 element transducer array. As stated on page 32, lines 5-10, it

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was now possible to use a single beamforming chip to process a 128 element transducer array with a "two orders of magnitude reduction in chip area, power consumption and weight when compared with conventional implementations."

Both Daigle and Blackwell are silent as to how to construct a beamforming device operating with the resolution and power consumption levels needed for such a portable system. The claims have been amended to recite both the channel requirement of the beamformer as well as the system weight of ten pounds or less to provide a portable ultrasound system. Reconsideration of the rejected claims is respectfully requested.

New claims 87-94 are also being added at this time.

The Examiner is encouraged to telephone the undersigned attorney to discuss any matter that would expedite allowance of the present application.

Respectfully submitted,  
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